

# **THE OFFICE OF REGULATORY STAFF**

## **DIRECT TESTIMONY**

**OF**

**LYNDA S. SHAFER**

**MAY 14, 2015**



**DOCKET NO. 2015-54-E**

**Petition of South Carolina Electric & Gas Company for  
Approval to Participate in a Distributed Energy  
Resource Program**

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**DIRECT TESTIMONY OF**  
**LYNDA SLEIGHTER SHAFER**  
**ON BEHALF OF**  
**THE SOUTH CAROLINA OFFICE OF REGULATORY STAFF**  
**DOCKET NO. 2015-54-E**  
**IN RE: PETITION OF SCE&G FOR APPROVAL TO PARTICIPATE IN A**  
**DISTRIBUTED ENERGY RESOURCE PROGRAM**

**Q. PLEASE STATE YOUR NAME, BUSINESS ADDRESS AND OCCUPATION.**

**A.** My name is Lynda Sleighter Shafer. My business address is 1401 Main Street, Suite 900, Columbia, South Carolina 29201. I am employed by the State of South Carolina as an Electric Utilities Specialist in the Electric Department of the Office of Regulatory Staff (“ORS”).

**Q. PLEASE STATE YOUR EDUCATIONAL BACKGROUND AND EXPERIENCE.**

**A.** I earned a Bachelor’s Degree from Bob Jones University in 1995 and a Master’s Degree from the University of South Carolina in 2010. I joined ORS in July 2009 as a Program Specialist and became an Electric Utilities Specialist in 2013. I previously appeared before the Public Service Commission of South Carolina (“Commission”) to present telecommunications market issues in an allowable ex-parte briefing and also to testify in two (2) electric rate cases and an annual fuel review.

1   **Q.     WHAT IS THE PURPOSE OF YOUR TESTIMONY?**

2   **A.**           The purpose of my testimony is to provide an overview of the Distributed  
3           Energy Resource Program Act (“Act 236”), describe the distributed energy resource  
4           programs (“DERP”) that South Carolina Electric & Gas (“SCE&G” or the  
5           “Company”) has asked the Commission to authorize, and present ORS’s  
6           recommendations regarding those programs.

7   **Q.     PLEASE DESCRIBE ACT 236.**

8   **A.**           Act 236 was signed into law June 2, 2014. Act 236 provides for (1) a  
9           distributed energy resource program for South Carolina which will promote the  
10          growth of renewable resources throughout the State; (2) a net metering methodology  
11          and program; (3) leasing of renewable electric generation equipment; (4) the  
12          promulgation of interconnection standards; (5) cost recovery to utilities and cost  
13          recovery caps to ratepayers; (6) studies to evaluate the extent of cost-shifting  
14          attributable to distributed energy resources; and (7) various other reports.

15   **Q.     WHY IS THE COMPANY PETITIONING THE COMMISSION FOR**  
16   **APPROVAL OF A DISTRUBUTED ENERGY RESOURCE PROGRAM?**

17   **A.**           Although participation in a distributed energy resource program is optional,  
18           pursuant to Act 236, the Company must have Commission approval of its distributed  
19           energy resource program before it can adopt new net energy metering (“NEM”) rates  
20           incorporating the NEM methodology established in Docket No. 2014-246-E. In  
21           Docket No. 2014-246-E, the Company agreed to make a filing to establish a  
22           distributed energy resource program within sixty (60) days of the effective date of the  
23           settlement agreement approved by the Commission in that docket.

1 **Q. WHAT DOES ACT 236 REQUIRE IN A DISTRIBUTED ENERGY**  
2 **RESOURCE PROGRAM?**

3 **A.** Act 236 states that any distributed energy resource program shall result in the  
4 development of renewable energy facilities, located in South Carolina before the end  
5 of 2020, with a cumulative nameplate capacity equal to at least two percent of the  
6 previous five-year average of the electrical utility's South Carolina retail peak  
7 demand. Of this two percent, Act 236 states that half of the power procured shall be  
8 from facilities sized between one (1) and ten (10) megawatts ("MW"), hereafter  
9 defined as "Utility Scale Program." The remaining half shall be procured from  
10 facilities sized less than one (1) MW ("Customer Scale Program"). A quarter of the  
11 Customer Scale Program must be derived from facilities with a nameplate capacity of  
12 less than 20 kilowatts ("kW"), hereinafter defined as the "Small Scale Requirement."

13 **Q. WHAT DOES THE ACT REQUIRE IN A DISTRIBUTED ENERGY**  
14 **RESOURCE PROGRAM APPLICATION?**

15 **A.** According to Act 236, a distributed energy resource program application must  
16 include the following components:  
17 a) a statement of the specific goals to be addressed by the program and the benefits  
18 to be achieved from its implementation;  
19 b) a description of the principal elements of the program and the benefits to be  
20 achieved from the implementation of each of those elements;  
21 c) a description of the utility's planned actions to implement the program and the  
22 anticipated timing of those actions;

- 1 d) the locational benefits and costs of proposed distributed energy resources, if  
2 relevant;
- 3 e) any proposed customer programs and changes in tariffs, or other mechanisms that  
4 support the prudent, efficient, and reliable deployment of cost-effective  
5 distributed energy resources and the goals of the distributed energy resource  
6 program;
- 7 f) additional utility expenditures necessary to integrate cost-effective distributed  
8 energy resources into distribution and transmission planning;
- 9 g) a description and evaluation of any barriers to the deployment of distributed  
10 energy resources as envisioned in the plan, if relevant;
- 11 h) a schedule of the projected incremental costs anticipated to implement the  
12 electrical utility's distributed energy resource program for each year of the subject  
13 period; and
- 14 i) an estimate of costs to be incurred pursuant to the distributed energy resource  
15 program and an estimate of those costs to be recovered pursuant to Sections  
16 58-27-865 and 58-39-140 to fully recover the projected costs of the program.

17 **Q. DOES SCE&G'S PETITION INCLUDE THE ELEMENTS REQUIRED BY**  
18 **THE ACT?**

19 **A.** When viewed together, the petition filed on February 9, 2015, and the  
20 supplemental testimony filed on May 5, 2015, provide all the elements required by  
21 Act 236.

1    **Q.    WHAT COSTS ARE RECOVERABLE UNDER ACT 236?**

2    **A.**            Act 236 allows the recovery of avoided and incremental costs associated with  
3            distributed energy resource programs. Recovery of avoided costs, which are payments  
4            for purchases of electricity, are calculated according to the lesser of rates negotiated  
5            pursuant to Public Utility Regulatory Policy Act of 1978, also known as PURPA or  
6            an electrical utility's most recently approved or established avoided cost rates in  
7            South Carolina.

8            Section 58-39-140(A) defines incremental costs as "all reasonable and prudent  
9            costs incurred by an electrical utility to implement a distributed energy resource  
10           program pursuant to the provisions of Section 58-39-130..." Incremental costs  
11           include but are not limited to the following: costs in excess of the avoided costs or  
12           negotiated PURPA rates; the full cost of a utility's investment in non-generating  
13           distributed energy resources; the utility's weighted average cost of capital as applied  
14           to the electrical utility's investment in distributed energy resources; generally  
15           accepted expenses associated with a project, such as operating and maintenance  
16           expenses, taxes, insurance, depreciation, overheads, etc.; and incremental labor cost  
17           associated with implementing a distributed energy resource program.

18    **Q.    HOW ARE AVOIDED AND INCREMENTAL COSTS ALLOCATED AND**  
19    **RECOVERED FROM CUSTOMERS?**

20    **A.**            The avoided and incremental costs of distributed energy resource programs,  
21            including NEM, are to be allocated and recovered from customer classes based on the  
22            utility's South Carolina firm peak demand data from the prior year—the same method  
23            that is used to allocate and recover variable environmental costs.

1           The recovery of incremental costs is capped annually at \$12 for residential;  
2           \$120 for commercial; and \$1,200 for industrial.

3   **Q.   DOES THE METHOD SCE&G HAS PROPOSED FOR RECOVERY**  
4   **COMPLY WITH THE METHOD OUTLINED IN ACT 236?**

5           Yes, SCE&G proposes that the incremental cost component of the fuel factors  
6           (“DERP Charge”) be billed as a dollar amount per account. Billing the DERP Charge  
7           as a fixed dollar amount per account ensures that customers are not billed more than  
8           the maximum annual amounts prescribed in Act 236.

9           While assessment of the DERP Charge will be requested in future annual fuel  
10          reviews, ORS finds SCE&G’s proposed method of recovering costs to be consistent  
11          with Act 236.

12   **Q.   PLEASE EXPLAIN HOW SCE&G’S DERP WILL RESULT IN THE**  
13   **DEVELOPMENT OF RENEWABLE ENERGY FACILITIES IN SOUTH**  
14   **CAROLINA.**

15   **A.**          In its petition, SCE&G describes its proposal to implement Utility Scale and  
16                  Customer Scale Programs. In order to acquire 42 MW of renewable generation in its  
17                  Utility Scale Program, the Company states that it will solicit proposals from solar  
18                  developers for the construction of solar farms on Company-owned property. The  
19                  Company proposes the following customer offerings to acquire 42 MW of renewable  
20                  energy in its Customer Scale Program: 1) NEM incentives, 2) bill credit agreements,  
21                  3) an experimental lease/finance program, and 4) Community Solar. To meet the  
22                  Small Scale Requirement of Act 236, the Company will have to acquire 10.5 MW of

1 the Customer Scale capacity from facilities with a nameplate capacity of 20 kW or  
2 less.

3 **Q. PLEASE EXPLAIN SCE&G'S PROPOSAL TO MEET THE UTILITY SCALE**  
4 **PROGRAM.**

5 **A.** SCE&G will solicit proposals for solar farms to be built on Company-owned  
6 property and leased to solar developers. The Company proposes to enter into a twenty  
7 (20)-year PPA for each facility. Currently, the Company has two (2) facilities,  
8 totaling over 4 MW, scheduled for completion in 2015. The costs associated with the  
9 PPA, in excess of the avoided cost rate, will be considered an incremental cost of the  
10 DERP.

11 **Q. DOES ORS HAVE ANY RECOMMENDATIONS TO THE UTILITY SCALE**  
12 **PROPOSAL?**

13 **A.** Yes, ORS recommends that the Company consider accelerating its  
14 implementation of the Utility Scale Program to take advantage of the federal  
15 investment tax credit ("ITC") which is scheduled to decrease after 2016. If the  
16 Company requires that proposed facilities are in-service before the end of 2016 and  
17 that bid prices reflect the federal ITC, the projects may be more cost effective.

18 **Q. PLEASE EXPLAIN SCE&G'S PROPOSAL FOR ITS CUSTOMER SCALE**  
19 **PROGRAM.**

20 **A.** SCE&G proposed four initiatives for the Customer Scale Program in its  
21 DERP. The first is an NEM incentive funded by the DERP. In Docket No. 2014-246-  
22 E, the Commission ordered that SCE&G, Duke Energy Carolinas, LLC, and Duke  
23 Energy Progress, Inc. (collectively, the "Utilities") offer new net metering customers



1 full retail value for energy they generate (“1:1 Retail Rate”). The Utilities will use the  
2 Commission-approved methodology to determine if DERP incremental costs are  
3 incurred as a result of providing net metering customers the 1:1 Retail Rate. The  
4 DERP incremental costs are considered the NEM incentive. The incentive will be  
5 available to new NEM customers who receive service under the new Net Metering  
6 Tariffs prior to January 1, 2021, and will continue until December 31, 2025.

7 The second Customer Scale Program initiative is a Bill Credit Agreement  
8 (“BCA”) which guarantees customer-generators a bill credit at a fixed rate for every  
9 kilowatt hour the customers’ systems generate. The amount of the credit varies based  
10 on the size of the installation and the customers’ rate schedules. However, once  
11 customers enter the BCA, the credit amount remains constant for ten (10) years  
12 regardless of changes in the rates customers pay for the energy they consume.

13 **Q. WHAT ARE THE ADDITIONAL CUSTOMER SCALE PROGRAMS?**

14 **A.** The third Customer Scale Program initiative is the experimental lease/finance  
15 program, which will be available to 1) municipalities, 2) churches, 3) schools, and 4)  
16 medium general service customers. Enrollment will be capped at 500 kW for each of  
17 the four customer groups and at 100 kW per customer. Once the systems are  
18 installed, the customers are free to enroll in either NEM or BCA. The payment for  
19 the equipment will be offset by the credit the customer receives for energy generation.  
20 The interest payments SCE&G receives from the lease or financing arrangement will  
21 be credited against the weighted average cost of capital the Company is allowed to  
22 earn on their investments in these projects. The Company indicated that the

1 amortization period over which the capital costs will be recovered will match the life  
2 of the asset.

3 The fourth Customer Scale Program initiative is Community Solar. Through  
4 Community Solar, residential customers as well as municipalities, churches, and  
5 schools can purchase a portion of a renewable energy facility owned by a third party  
6 and will receive a credit on their bills based on their share of the energy output of this  
7 facility. Residential customers are limited to a set of panels with a nameplate  
8 capacity of 20 kW or less. SCE&G requests that enrollment in its Community Solar  
9 program be applied towards the satisfaction of the Small Scale Requirement of Act  
10 236.

11 SCE&G requests that it be allowed to amend its incentives and incentive plans  
12 at any time and provide written notice to the Commission of those changes during its  
13 annual fuel review.

14 **Q. DOES ORS HAVE ANY RECOMMENDATIONS FOR CUSTOMER SCALE**  
15 **PROGRAM?**

16 **A.** Yes. The Company indicates in its petition that all customer generators, even  
17 those with small installations, will have to certify as a Qualifying Facility ("QF")  
18 under PURPA regulations to participate in the DERP. ORS recommends that the  
19 Company clarify in its tariffs that the requirement to certify does not apply to  
20 residential and small commercial customers whose system will be smaller than 1  
21 MW.

1    **Q.    DOES ORS HAVE ANY RECOMMENDATIONS FOR THE NEM**  
2    **INCENTIVE?**

3    **A.**            No. The Company proposes to implement this incentive as contemplated in  
4            Docket No. 2014-246-E.

5    **Q.    DOES ORS HAVE ANY RECOMMENDATIONS FOR THE BCA**  
6    **PROGRAM?**

7    **A.**            Yes, ORS recommends that the Company file a specific tariff for the BCA  
8            program. Currently, the Company has the Rate PR-1 for small power producers and  
9            cogenerators, which is a similar rate but does not incorporate DERP incentives.  
10          Without a BCA tariff, customers may find the process of deciding between NEM and  
11          PR-1, which will have filed tariffs, and BCA, which does not, confusing.

12   **Q.    DOES ORS HAVE ANY RECOMMENDATIONS FOR THE**  
13   **LEASE/FINANCE OPTION?**

14   **A.**            Yes, it does. ORS recommends that the Company postpone its request for  
15          approval of the lease/finance option at this time. Once the solar leasing market in  
16          South Carolina matures and the Company can offer more details on the terms of the  
17          agreements, the Company could revisit its request for approval of this experimental  
18          program.

19   **Q.    DOES ORS HAVE ANY RECOMMENDATIONS FOR COMMUNITY**  
20   **SOLAR?**

21   **A.**            Yes, ORS recommends that the Company file a tariff for the Community  
22          Solar program. Without a tariff, customers may find the process of deciding between  
23          NEM, BCA and Community Solar confusing.

1           ORS also recommends that the Company investigate opportunities to make  
2 participation in the Community Solar program more affordable, possibly by  
3 subsidizing the purchase price to shorten the payback period. The Company's current  
4 proposal requiring customers to purchase panels from a third party without the benefit  
5 of the ITC may not be attractive for many customers.

6 **Q. DOES ORS HAVE ANY OTHER RECOMMENDATIONS FOR THE**  
7 **CUSTOMER SCALE PROGRAM?**

8 **A.**           Yes. In order to incent low-income customers to participate in SCE&G's  
9 DERP, ORS recommends that the Company evaluate the viability of future incentives  
10 and programs, beyond Community Solar, for the needs of low-income customers.

11           ORS also recommends that the Company evaluate its offerings to non-  
12 residential customers and consider expanding opportunities for the commercial and  
13 industrial sectors.

14           ORS also recommends that, should any program included in the Utility Scale  
15 or Customer Scale Programs now or in the future incur capital costs, those costs  
16 should be amortized over a period of 20 years.

17 **Q. DOES ORS HAVE A RECOMMENDATION AS TO THE COMPANY**  
18 **RETAINING OWNERSHIP OF THE RENEWABLE ENERGY CREDITS**  
19 **("RECs") ASSOCIATED WITH ANY ENERGY GENERATED UNDER THE**  
20 **DERP?**

21 **A.**           Yes. The Company proposes to retain ownership of the RECs associated with  
22 the energy generated as a result of the DERP, including energy generated from new  
23 net metering customers. Considering that South Carolina ratepayers will pay for the

1 energy these RECs represent, ORS agrees that the Company should retain ownership  
2 of the RECs. However, ORS recommends that all value derived from RECs be  
3 credited against DERP incremental costs or used to offset future environmental  
4 compliance costs incurred by the Company.

5 **Q. WHAT ARE ORS'S RECOMMENDATIONS FOR ANY PROGRAM**  
6 **MODIFICATIONS TO SCE&G'S DERP?**

7 **A.** While ORS understands the Company's desire for program flexibility, ORS  
8 proposes that SCE&G file for Commission approval of any program additions or  
9 terminations. Additionally, ORS recommends that SCE&G seek Commission  
10 approval for any program modification that results in a variation greater than 30  
11 percent of a program's approved incentive. ORS also recommends that SCE&G be  
12 allowed to temporarily suspend a program for up to 90 days concurrent with notifying  
13 the Commission and awaiting approval of program modifications.

14 In order to obtain stakeholder feedback, ORS recommends that the Company  
15 convene a DERP Advisory Group as a resource for ideas related to fostering growth  
16 in the renewable generation market in South Carolina and for concerns about the  
17 design and implementation of SCE&G's DERP. ORS recommends that the DERP  
18 Advisory Group meet at least quarterly and that group members receive notification  
19 in writing 15 days prior to SCE&G filing with the Commission to add, modify or  
20 terminate any DERP offering.

21 **Q. DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?**

22 **A.** Yes.